

Appl. No. 09/989,426

Art Unit 1774

May 18, 2004

Reply to Office Action of November 19, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application.

Listing of Claims:

1. (**Currently Amended**) A metal cord for reinforcing a rubber article comprising:

a core formed of one filament; and

a sheath formed of 1 to 6 filaments arranged around the core,

wherein said filament of the core is formed of a waved filament waved in a two-dimensional wave shape having crest portions and trough portions in a repeated manner, in a state before being bundled, ~~and~~ is twisted with said sheath while applying the torsion so as to be formed in a three-dimensional wave shape within said metal ~~cord~~ cord, and the filament of the core in the two-dimensional wave shape is a zigzag shape.

2. (**Previously Presented**) The metal cord for reinforcing a rubber article as claimed in claim 1, wherein a diameter d of said core filament is between 0.15 and 0.50 mm and substantially the same as that of the filament of said sheath.

Appl. No. 09/989,426

Art Unit 1774

May 18, 2004

Reply to Office Action of November 19, 2004

3. (**Currently Amended**) A metal cord for reinforcing a rubber article comprising:

a core formed of one filament, wherein said filament has a two-dimensional wave shape with crest portions and trough portions in a repeated manner; and

a sheath formed of 1 to 6 filaments arranged around said core;

wherein said sheath and said core are in a twisted state and form a three-dimensional wave shape; ~~and~~

the diameter of said two-dimensional wave shape of the filament of the core is larger than the diameter of the filament of the core ~~itself.~~
itself; and

the filament of the core in the two-dimensional wave shape is a zigzag shape.

4. (**Previously Presented**) The metal cord for reinforcing a rubber article as claimed in claim 3, wherein a diameter d of said core filament is between 0.15 and 0.50 mm.

5. (**Previously Presented**) The metal cord for reinforcing a rubber article as claimed in claim 3, wherein a diameter d of the filament of said sheath is between 0.15 and 0.50 mm.

Appl. No. 09/989,426

Art Unit 1774

May 18, 2004

Reply to Office Action of November 19, 2004

6. (**Previously Presented**) The metal cord for reinforcing a rubber article as claimed in claim 3, 4 or 5, wherein a diameter d of said core filament is substantially the same diameter d as that of the filament of said sheath.

7. (**Canceled**)

8. (**Previously Presented**) The metal cord for reinforcing a rubber article as claimed in claim 1, wherein the filament of the core in the two-dimensional wave shape is a sine wave shape.

9. (**Previously Presented**) The metal cord for reinforcing a rubber article as claimed in claim 1, wherein the filament of the core in the two-dimensional wave shape has a wave pitch P_w being between 3.0 and 9.0 mm and a wave height h being between 0.20 and 0.80 mm

10. (**Previously Presented**) The metal cord for reinforcing a rubber article as claimed in claim 1, wherein a torsion pitch P_n at a time of twisting the filament of the core in the two-dimensional wave shape is between 5.0 and 600.0 mm.

11. (**Previously Presented**) The metal cord for reinforcing a rubber article as claimed in claim 1, wherein a twist pitch P_y at a time of

Appl. No. 09/989,426

Art Unit 1774

May 18, 2004

Reply to Office Action of November 19, 2004

twisting the filament of the sheath wave shape is between 5.0 and 30.0 mm.

12. (**Previously Presented**) The metal cord for reinforcing a rubber article as claimed in claim 1, wherein said torsion pitch P_n of the filament of the core is larger than the twist pitch P_y of the filament of the sheath.

13. (**Withdrawn**) A method of producing a metal cord having a core formed of one filament, and a sheath formed of 1 to 6 filaments arranged around the core, comprising the steps of:

forming said filament of the core from a waved filament having a two-dimensional wave shape with crest portions and trough portions in a repeated pattern, in a state before being bundled, and twisting said filament with said sheath while applying torsion such that said filament is formed into a three-dimensional wave shape within the metal cord.

14. (**Withdrawn**) The method of producing a metal cord as claimed in claim 13, wherein a diameter d of said core filament is between 0.15 and 0.50 mm and substantially the same as that of the filament of said sheath.

Appl. No. 09/989,426

Art Unit 1774

May 18, 2004

Reply to Office Action of November 19, 2004

15. (**Withdrawn**) The method of producing a metal cord as claimed in claim 13, wherein the filament of the core in the two-dimensional wave shape is a zigzag shape.

16. (**Withdrawn**) The method of producing a metal cord as claimed in claim 13, wherein the filament of the core in the two-dimensional wave shape is a sine wave shape.

17. (**Withdrawn**) The method of producing a metal cord as claimed in claim 13, wherein the filament of the core in the two-dimensional wave shape has a wave pitch P_w being between 3.0 and 9.0 mm and a wave height h being between 0.20 and 0.80 mm.

18. (**Withdrawn**) The method of producing a metal cord as claimed in claim 13, wherein a torsion pitch P_n at a time of twisting the filament of the core in the two-dimensional wave shape is between 5.0 and 600.0 mm.

19. (**Withdrawn**) The method of producing a metal cord as claimed in claim 13, wherein a twist pitch P_y at a time of twisting the filament of the sheath wave shape is between 5.0 and 30.0 mm.

Appl. No. 09/989,426

Art Unit 1774

May 18, 2004

Reply to Office Action of November 19, 2004

20. **(Withdrawn)** The method of producing a metal cord as claimed in claim 13, wherein said torsion pitch P_n of the filament of the core is larger than the twist pitch P_y of the filament of the sheath.